UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,765	03/28/2002	Stephan Appelt	TURKP 0118US	2593

23908 7590 10/19/2005

RENNER OTTO BOISSELLE & SKLAR, LLP
1621 EUCLID AVENUE
NINETEENTH FLOOR
CLEVELAND, OH 44115

EXAMINER	
SINES, BRIAN J	
ART UNIT	**PAPER NUMBER**
1743	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/018,765	APPELT ET AL.	
	Examiner	Art Unit	
	Brian J. Sines	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *7/27/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1 – 4, 6 – 7, 9, 10, 12 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilks, Jr. (U.S. Pat. No. 5,125,742 A) (hereinafter "Wilks").

Wilks teaches a cylindrical glass sample cell (16) comprising two glass windows (28) and endplates (24 & 26). The cell has an inlet 30 and an outlet 32 (see figure 2 – 4; col. 3, lines 25 – 68). As shown in figure 2, endplate 24 inherently contains a hole or orifice into which glass window 28 is inserted and positioned. As shown in figures 2 & 4, the shape and size of window 28 inherently corresponds to the shape and size of the orifice. The orifice and window inherently comprise edges or rims. The rim of the window is inherently joined with the rim of the corresponding orifice. Regarding the use of the term "fused" in describing how the window and orifice are joined, the determination of patentability is based upon the apparatus structure itself.

The patentability of a product or apparatus does not depend on its method of production or formation. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (see MPEP § 2113). Furthermore, the use of fusing techniques are well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art to join the rims of the window 28 and endplate 24 using a fusing technique.

Wilks teaches various size dimensions for the disclosed apparatus (see col. 2, line 5 – col. 3, line 21). The recited size dimensions are therefore considered known result effective variables. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The discovery of an optimum value of a known result effective variable, without producing any new or unexpected results, is within the ambit of a person of ordinary skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980). The Court has recognized that an artisan is presumed to have skill, rather than lack of skill. See *In re Sovish*, 226 USPQ 771 (Fed. Cir. 1985). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the various specified sized dimensions for the disclosed apparatus in order to provide for effective sample cell operation.

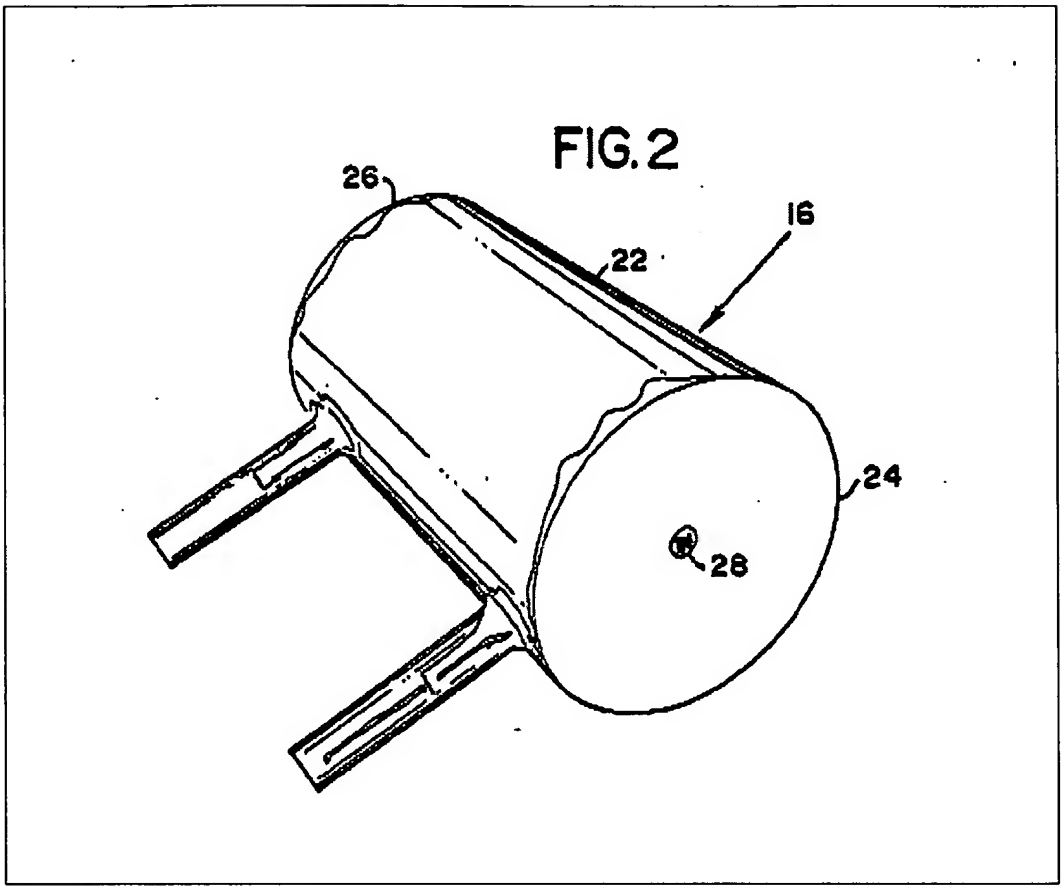
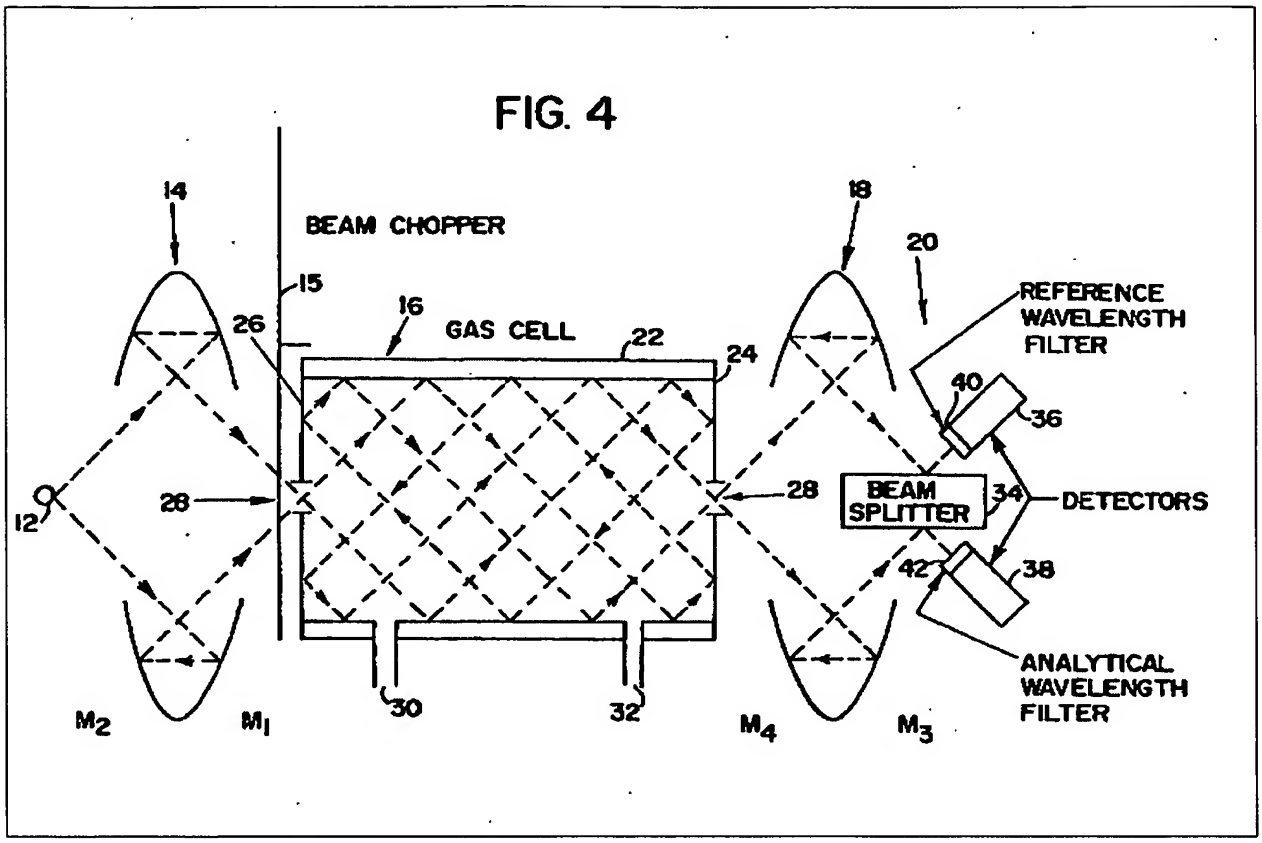


FIG. 2
26
16
22
24
28



2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilks in view of Ostrander *et al.* (U.S. Pat. No. 6,368,560 B1) (hereinafter "Ostrander") and Damen *et al.* (U.S. Pat. No. 5,886,463 A) (hereinafter "Damen"). Wilks does not specifically teach the use of either borosilicate or borofloate glass in fabricating the claimed apparatus. Ostrander does teach a sample cell manufactured from borosilicate glass (see col. 3, lines 39 – 48). In addition, Damen does teach the use of borofloate glass as a transparent material, which is suitable for use as a window material (see col. 10, lines 14 – 23). The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07).

Therefore, it would have been obvious to a person of ordinary skill in the art to utilize a borosilicate and borofloate glass in the fabrication of the sample cell as recited in claim 5.

3. Claims 11, 14 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilks in view of Yokokawa *et al.* (U.S. Pat. No. 5,785,729 A) (hereinafter "Yokokawa"). Wilks does not specifically teach the use of grinding or cleaning with hydrofluoric acid prior to the formation of a fused joint in manufacturing the claimed apparatus. However, as evidenced by Yokokawa, grinding a glass article and washing the glass article with hydrofluoric acid prior to fusing is a technique that is well known in the art glass article manufacture (see, e.g., col. 11, line 63 – col. 12, line 21). A person of ordinary skill in the art would have recognized the suitability of utilizing such treatment steps prior to heat-fused joint formation. Therefore, it would have been obvious to a person of ordinary skill in the art to provide for the method of fabrication as recited in claim 11 in order to ensure an effective and secure seal between the component glass parts of the apparatus.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilks in view of Paitchell (U.S. Pat. No. 4,523,740) (hereinafter "Paitchell").

Wilks does not specifically teach the incorporation of a valve structure being made of glass and including ring seals comprising ethylene propylene. Paitchell does teach the use of a valve body structure comprising an ethylene or propylene copolymer seal (see col. 3, lines 50 – 56). In addition, glass valve structures are well known in the art. The Courts have held that the selection of a known material, which is based upon its suitability for the intended use, is within

the ambit of one of ordinary skill in the art. See *In re Leshin*, 125 USPQ 416 (CCPA 1960) (see MPEP § 2144.07). Therefore, it would have been obvious to a person of ordinary skill in the art to utilize the valve structure as claimed to provide for effective gas flow and apparatus operation.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilks in view of M.S. Rosen et al. (applicant's IDS, filed 12/17/2001) (hereinafter "Rosen").

Wilks does not specifically teach the incorporation of the disclosed sample cell with a inert gas polarizer. However, as evidenced by Rosen, the use of gas sample cells with inert gas sample polarizers are well known in the art (see, e.g., figure 2). Hence, a person of ordinary skill in the art would accordingly have had a reasonable expectation for success in incorporating the use of a gas sample cell with a gas polarizer. The Courts have held that the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986) (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a gas sample cell with a gas polarizer as claimed.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).